

ABSTRACT OF THE DISCLOSURE

The object of the present invention is to provide a capacity control valve for a variable displacement compressor that controls flow rate without the need for increased solenoid power. A compact, low-cost capacity control valve is provided as an integrated structure of a first control valve and a second control valve. The first control valve, placed on a passageway of refrigerant discharged from a variable displacement compressor, functions as a variable orifice whose cross-sectional area can be set as desired by varying the power of a solenoid unit. Part of the refrigerant discharged at pressure P_{dH} is supplied to the crank chamber, in which the pressure is P_c . The second control valve controls this refrigerant flow to the crank chamber in such a way that the differential pressure between upstream pressure P_{dH} and downstream pressure P_{dL} of the discharged refrigerant will be regulated at a specified level. This arrangement makes it possible to reduce the size of the solenoid unit because the first control valve does not need a large force to yield a small differential pressure that is required for operation.